**D. Debris Flows**

Debris flows are mixtures of water, rock, soil and organic material (70-90 % solids by weight) that form a muddy slurry much like wet concrete and flow down slope, commonly in surges or pulses, due to gravity. They generally remain confined to stream channels in mountainous areas, but may reach and deposit debris over large areas on alluvial fans at and beyond canyon mouths.

The Weber County Debris Flow Hazard Maps were constructed from the boundaries of active alluvial fans and areas with slopes steeper than 30 percent. Any proposed development in areas identified as debris flow hazard areas shall be evaluated prior to approval of the proposed development.

1. A study shall be prepared by an Engineering Geologist for any development proposed in or adjacent to a Debris Flow Hazard area and shall include:

    a. An analysis of the past history of debris flow at the site based on subsurface exploration to determine the nature and thickness of debris flow and related alluvial fan deposits.

    b. An analysis of the drainage basin's potential to produce debris flows based on the presence of debris slides and colluvium-filled slope concavities, and an estimate of the largest probable volumes likely to be produced during a single event.

    c. An analysis of the stream channel to determine if the channel will supply additional debris, impede flow, or contain debris flows in the area of the proposed development.

    d. An analysis of man-made structures upstream that may divert or deflect debris flows.

    e. Recommendations concerning any channel improvements, flow modifications and catchment structures, direct protection structures or flood proofing measures, if necessary, in order to protect the development.

    f. Upon approval of the County Engineer, the report shall be presented to the Planning Commission along with review comments for recommendation of approval by the County Commission.